

**REMARKS**

Favorable reconsideration and allowance of the present application is respectfully requested.

Currently, claims 39-75, including independent claims 39 and 57, are pending in the present application. Independent claim 39, for instance, is directed to a fibrous substrate comprising nanoparticles having a surface area of at least about 50 square meters per gram. The nanoparticles are modified with a metal ion and have a negative zeta potential prior to modification. The substrate also comprises a binder that durably adheres the modified nanoparticles to the substrate. Independent claim 57 also requires modified nanoparticles, but requires the use of nanoparticles having a positive zeta potential that durably adhere the modified nanoparticles to the substrate.

In the Office Action, previous independent claims 1, 24, 27, 29, and 33 were rejected under 35 U.S.C. §102(b) in view of U.S. Patent No. 5,480,636 to Maruo, et al. Maruo, et al. describes titanium dioxide particles having a zinc oxy compound supported thereon. However, Maruo, et al. completely fails to disclose various aspects of the present claims. For instance, nowhere does Maruo, et al. disclose modified nanoparticles that are durably coated onto a fibrous substrate using a "binder" (claim 39) or "nanoparticles having a positive zeta potential" (claim 57). As noted in the present specification, the bonding of negatively charged particles (e.g., silica nanoparticles) was conventionally problematic in that many fibrous substrate are also negatively charged. This adhesion barrier was successfully overcome by the present invention. For at least the reasons set forth above, Applicants respectfully submit that the present claims are not anticipated by Maruo, et al.

Previous independent claims 1, 10, 20, 24, and 27 were also rejected in the Office Action under 35 U.S.C. §102(e) in view of U.S. Patent Application Publication No. 2002/0149656 to Nohr, et al. Nohr, et al. relates to a recording medium containing a nanoparticle having a colorant template disposed on a particle template. However, Nohr, et al. fails to disclose various aspects of the present claims. For instance, nowhere does Nohr, et al. disclose modified nanoparticles that are durably coated onto a fibrous substrate using a “binder” (claim 39) or “nanoparticles having a positive zeta potential” (claim 57). For at least the reasons set forth above, Applicants respectfully submit that the present claims are not anticipated by Nohr, et al.

In the Office Action, previous independent claims 1, 24, 27, 29, and 33-34 were also rejected under 35 U.S.C. §102(e) in view of U.S. Patent Application Publication No. 2003/0203009 to MacDonald, et al. MacDonald, et al. relates to high surface area particles having at least one metal ion present on the surface. However, MacDonald, et al. fails to disclose various aspects of the present claims. For instance, nowhere does MacDonald, et al. disclose modified nanoparticles that are durably coated onto a fibrous substrate using a “binder” (claim 39) or “nanoparticles having a positive zeta potential” (claim 57). For at least the reasons set forth above, Applicants respectfully submit that the present claims are not anticipated by MacDonald, et al.

Besides the above-mentioned rejections, previous independent claim 10 was also rejected under 35 U.S.C. §103(a) in view of MacDonald, et al. Under the provisions of 35 U.S.C. § 103(c), however, a patent or publication that qualifies as prior art only under 35 U.S.C. §§ 102(e), (f), or (g) is not available as prior art if it and the claimed invention were, at the time the invention was made, subject to an obligation of

assignment to the same person. In the instant case, MacDonald, et al. and the present application were, at the time of the invention, each subject to assignment to Kimberly-Clark Worldwide, Inc.<sup>1</sup> Thus, Applicants respectfully submit that MacDonald, et al. is not available as prior art to the present application under 35 U.S.C. § 102(e)/103.

As a final matter, previous claims 1-33 were also provisionally rejected under the judicially created doctrine of obviousness-type double patenting in view of certain claims of co-pending, co-owned U.S. Application Serial Nos. 10/686,939; 10/687,425; 10/687,269; and 10/137,052. Without commenting on the propriety of this rejection, Applicants agree to consider submitting terminal disclaimers, to the extent necessary, at such time the application is otherwise in condition for allowance.

It is believed that the present application is in complete condition for allowance and favorable action is thus respectfully requested. Examiner Sperty is invited and encouraged to telephone the undersigned, however, should any issues remain after consideration of this amendment.

Please charge any additional fees required by this Amendment to Deposit Account No. 04-1403.

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<sup>1</sup> The files of the present application refer to an assignment recorded in the PTO at Reel and Frame Nos. 015229/0088 to Kimberly-Clark Worldwide, Inc. Likewise, MacDonald, et al. was formally assigned to Kimberly-Clark Worldwide, Inc. as recorded in the PTO at Reel and Frame Nos. 012862/0470.

Appl. No. 10/686,687  
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Respectfully submitted,  
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